WESTON
PUBLIC SCHOOLS

WESTON, MASSACHUSETTS 02493 • TEL 781-786-5270
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Gerard McCarty
DIRECTOR OF
FACILITIES (TOWN-WIDE)

October 16, 2013

Ms. Kimberly Tisa
PCB Program Coordinator
US Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Reference: **PCB Abatement Plan**
Field School, Weston, MA

Dear Ms. Tisa:

In accordance with the regulations at 40 CFR 761.61(a) & (c), the following attached PCB Notification and Abatement Plan has been prepared for the Field School, 99 School Street, Weston, MA. Plans are to demolish the building. PCBs greater than 50 parts per million were detected in expansion joint caulking and paint on floors and walls.

All sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site, are on file by contacting me and are available for EPA inspection.

If you have any questions concerning this data, please do not hesitate to give me a call.

Very truly yours,

Gerard McCarty
Director of Facilities
Weston Public Schools

Attached: PCB Abatement Plan-Field School

Revised Polychlorinated Biphenyl Abatement Plan

For the Site:

Field Elementary School
99 School Street
Weston, MA. 02493

Prepared by:

Universal Environmental Consultants
&
Lord Associates, Inc.
1506 Providence Highway, Suite 30
Norwood, MA 02062

Project No. 2052

April 17, 2014

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1.0 Introduction:

1.1 Purpose & Background:

Pursuant to 40 CFR 761.61(a) and 761(c) of the Toxic Substances Control Act (TSCA), Universal Environmental Consultants (UEC) and consultant Lord Associates, Inc. (LAI) are submitting this Revised Polychlorinated Biphenyl (PCB) Abatement Plan for the site referred to as the Field Elementary School in Weston, Massachusetts (the "Site"). The need for the Abatement Plan was triggered by the identification of PCBs in interior caulking and paint in planned building demolition of the school.

In planning for the demolition of the building, the Town contracted with Environmental Health and Engineering (EHE) of Needham, Massachusetts to complete a "Pre-Demolition/Renovation Hazardous Materials Assessment" of the building. EHE inventoried building materials potentially containing PCBs and identified various expansion joint caulks, industrial paints and coatings. Follow-up sampling of building materials in June of 2012 identified PCBs in caulk ranging from 15,400 to 45,900 parts per million (ppm) and paint with PCB concentrations ranging from 12.2 to 886 ppm as Aroclor 1254.

Notification was made to EPA in July 2012 to complete a risk-based plan for the removal and encapsulation of PCB containing building material. EPA approved the plan as a "Short-term" plan pursuant to §761.61(c) and §761.62(c) on August 22, 2012. The expiration date of the EPA approval is December 31, 2014. Approval required the Town to submit a PCB cleanup and disposal plan under §761.61 and §761.62 to address PCB contamination at the Site at least 90 days prior to the approval expiration date.

The Town implemented the Short-term Removal and Encapsulation Plan in August 2012. Approximately 1,400 linear feet (LF) of interior transition joint caulking was removed, and adjacent porous material cleaned and encapsulated. Expansion joints that were deemed "inaccessible" were covered by plastic/metal panels. In addition, approximately 3,000 square feet (SF) of painted surfaces was encapsulated via an epoxy coating at the lower level of the building.

Plans are now to demolish the school building. Demolition of the building will require the removal of remaining expansion joint caulking and paint containing PCBs. This Abatement Plan proposes to remove all of the hidden and encapsulated expansion joint caulking and adjacent masonry as well as PCB containing paint identified as having concentrations greater than 50 ppm. EHE had earlier asserted that all other building material with PCB concentrations less than 50 ppm were considered "excluded" material pursuant to §761.3.

1.2 Contact Information:

The following information pertinent to the persons assuming responsibility for conducting the Abatement Plan (i.e., the Potentially Responsible Party, PRP) is provided as follows:

PRP Contact Information:

Name: Weston School District
C/o Gerald McCarty , Director of Facilities
Address: 89 Wellesley Street, Weston, MA. 02493

Environmental Consultants/Licensed Site Professional (LSP) Information:

Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702

UEC Consultant & LSP:

Name: Ralph J. Tella, Lord Associates, Inc.
LSP#: 7473
Address: 1506 Providence Highway, Suite 30, Norwood, MA.
Telephone: (781) 255-5554 x1004

2.0 Site Description:

2.1 Building Description

The Field Elementary School is a two-story brick structure of approximately 45,000 square feet. One story is below grade. Built in 1952, it has always been used as a school. A small grass-covered strip of land is located in the front of the building, north and south sides. Behind the school to the west, the area surrounding the building is paved (see **Figure 1** & Photographs in **Appendix A**).

2.2 Land Use and Surrounding Receptors:

The property on which the School is located is within a primarily residential neighborhood along School Street. The School provides classroom education in grades 4 & 5. Potential receptors include students, visitors, faculty and staff. There are no adjacent surface water bodies, wetlands, or critical wildlife habitats. The closest surface water body is the Stoney Brook Basin over one mile to the east.

2.3 Nature and Extent of PCB Contamination:

A complete description of the nature and extent of PCBs identified at the school was previously submitted to EPA in a July 2012 Work Plan for the Removal and Encapsulation of Building-Related PCBs prepared by EH&E, Inc. Following implementation of the EHE July 2012 Work Plan for the Removal and Encapsulation of Building-Related PCBs, the following remaining building material containing PCBs with concentrations greater than 50 ppm have been identified:

Table 1
Building Material to be Removed

Location	Type of Materials	Approximate Quantities
Throughout the School	Hidden Expansion Joint caulking Building Materials (CMU)	300 LF 250 tons
Ground Floor Areas	Grey Floor Paint	2,000 SF
Cafeteria	Blue over Grey Wall Paint	300 SF
Ground Floor Stairs to Gymnasium	Red Floor Paint	250 SF

According to the July 2012 Work Plan, the remaining expansion joint caulking had PCB concentrations ranging from 12,400 to 31,500 ppm. The gray floor paint on the ground floor and basement loading dock areas had PCB concentrations ranging from 3 to 783 ppm. The red floor paint on the stairs to the gym floor had PCB concentrations ranging from 333 to 886 ppm. The blue wall paint in the cafeteria had PCB concentrations ranging from 12 to 85 ppm.

The locations of these materials are depicted on the attached **Figures A.7, A.8 & A.9** following the text of this plan.

3.0 Abatement Plan:

3.1 Plan Objectives:

The objectives of this Abatement Plan are to properly remove all materials identified as PCB containing bulk product waste material for off-site disposal prior to building demolition. This includes all of the remaining building material identified in **Table 1**.

Bulk sampling of adjacent masonry in July 2012 indicated that PCBs had leached into them at concentrations greater than 1 ppm. At a distance of two inches from the caulk the concentrations ranged from 0.135 to 65 ppm.[1] At ten of fifteen locations sampled at a distance of two inches from the bead of caulk, concentrations were less than 20 ppm total PCBs. To facilitate the caulk removal process, one row of brick or 12 inches of surrounding masonry (CMU and mortar) to either side of the joint will be removed for off-site disposal.

[1] EHE July 30, 2012 Plan for Removal and Remediation of Building-Related PCBs, p.10

The painted floors will be removed via scarification to a depth of ½-inch. Should verification sampling indicate PCBs greater than 50 ppm, an additional ½ inch of concrete will be removed.

3.2 Work Plan:

3.2.1 Permits and Compliance:

A. The Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State, and local laws, rules, and regulations pertaining to Work practices, protection of Workers, authorized visitors to the site, persons, and property adjacent to the Work.

B. Perform PCB related Work in accordance with EPA Regulations at 40 CFR 761.1 (Toxic Substances Control Act), MADEP Hazardous Waste Regulations Chapter 310 CMR 30, OSHA Regulations at 29 CFR 1910.1000, as specified herein. Where more stringent requirements are specified, adhere to the more stringent requirements.

C. The Contractor must maintain current certificates of training, licenses or registrations pursuant to OSHA, MADEP and EPA regulations for all Work related to this Project, including the removal, handling, transport, and disposal of hazardous and industrial waste.

D. The Contractor shall be prepared to obtain an EPA ID number if so directed by the Owner.

3.2.2 Work Area Preparation:

A. The Work Area will be enclosed within the school. PCB caution signs shall be posted at all approaches to the PCB Work Area. Post all emergency exits as emergency exits only on the Work Area side, post with PCB caution signs on the non-Work Area side. Provide all non-Work Area stairs and corridors accessible to the PCB Work Area with warning tapes at the base of stairs and beginning of corridors. Warning tapes shall be in addition to caution signs.

B. Access to areas of work shall be regulated to prevent unauthorized visitors.

C. Flooring surfaces under each Work Area will have a layer of 6 mil fire retardant polyethylene sheeting. All operable windows within each Work Area will be closed. All HVAC equipment will be shut-off.

D. Dust monitors will be placed downwind of the school during each work shift. Upwind ("background") readings will also be collected for reference. The monitors will be checked every hour at a minimum and a daily log of readings will be maintained. In the event that readings exceed the daily EPA PM 10 National Ambient Air Quality Standard of 150-ug/m^3, work will be temporarily stopped and appropriate engineering controls implemented such as water misting.

3.2.3 Removal of Materials:

A. PCB-containing materials shall be removed in accordance with the Contract Documents and the approved PCB Work Plan.

B. To avoid the need to remove caulk from Non-PCB items such as adjacent masonry, one row (12") of adjacent brick and mortar from which PCB materials are removed shall be removed for off-site disposal with the PCB materials.

C. Mechanical cutting or grinding of PCB materials is not permitted unless the equipment has factory- equipped HEPA filtered exhaust.

D. Remove accessible caulking that could be disturbed before cutting building components.

E. All removed PCB material shall be placed into 6 mil plastic disposal bags or other suitable container upon detachment from the substrate. Large components with PCB material or PCB residue shall be wrapped in one layer of 6 mil polyethylene sheeting. Sharp components likely to tear disposal bags shall be placed in fiber drums or boxes and then wrapped with sheeting.

F. Power or pressure washers are not permitted for PCB removal or clean-up procedures.

G. All construction and demolition debris determined by the Environmental Consultant to be contaminated with PCB shall be handled and disposed of as PCB waste in accordance with this plan.

H. All PCB waste must be located at or near the point of generation, under the control of the Project Supervisor. All waste must be moved within 3 days to a Container Storage Area (CSA) or off-site. Waste may be stored at the CSA for up to one year, during which labeling, inspections, and other requirements must be met as described in 40 CFR 761.40 & 761.65. It is required that all PCB waste be removed for disposal within one year from the Site.

I. Closure of the CSA. If an EPA ID number and CSA were created specifically for the PCB removal work, the Contractor must also close out the CSA and the Consultant shall notify the MADEP/EPA that the hazardous waste activity has concluded, and that the storage area is to be closed.

J. Personal protective equipment, including respirators, shall be utilized and worn during all removal operations until the Work Area is cleared by the Abatement Project Monitor (APM).

K. Following completion of gross abatement and after all accumulations of PCB waste materials have been containerized, the decontamination procedures in **Section 3.2.4** shall be followed.

Remediation Waste <50?

3.2.4 Equipment and Area Decontamination:

A. When removal of PCB materials and surrounding row of masonry is completed, the decontamination process shall consist of vacuuming (with a HEPA filter), wet wiping/mopping and a repeated vacuuming (with a HEPA filter) of the entire work area. All surfaces in and around the work area must be free of dust generated during the work. Dispose of vacuum contents as PCB Remediation Waste.

B. Based on visual observation, if dust or debris has migrated through the dust barriers to areas of the building other than the immediate work area, those areas shall be incorporated into the work area and thoroughly decontaminated to ensure all visible dust generated by the activity is eliminated.

C. Dust barriers and other protective sheeting shall be placed in disposable construction bags and disposed of as PCB Remediation Waste.

D. Decontaminate all tools and equipment before removal from the work area in accordance with 40 CFR 761 Subpart S double wash-rinse techniques. A solvent such as hexane or high terpene (>65%) hydrocarbon content solution may be used.

E. Upon completion of decontamination and removing temporary dust barriers, a final inspection shall be performed by the Contractor and APM.

3.3 Schedule:

Planning work will commence once EPA approval is obtained. A definitive work schedule will be prepared once the project has been successfully bid and awarded. A contractors work plan and certification of understanding from the Town, laboratory and abatement contractor will then be submitted.

3.4 Quality Control and Assurance Plan:

3.4.1 Post Abatement Verification Inspection:

Following the removal of all PCB Bulk Material and adjacent twelve inches of masonry and ½ inches of concrete flooring, a visual inspection of the work site area will be performed to verify the removal of all such visible caulk material, and adjacent masonry.

3.4.2 Post Abatement Verification Sampling:

check with Kim - no samples at Whde blvd

Post abatement verification sampling will be performed by UEC at the following schedule:

- Expansion Joints: One (1) sample each side per expansion joint for the first 10 expansion joint (approximately 20 samples), then one (1) sample each side for every 10 expansion joint (approximately 24 samples) should the first round found to be <1 ppm.
- Painted Surfaces: One (1) per 30 meter^2 (approximately 100 SF) grid square of space where concentrations >50 ppm were identified for an estimated 25 samples.

Sampling of masonry will be completed in accordance with EPA Standard Operating Procedures for Sampling Porous Surfaces for PCBs (see **Appendix B**).

no samples from concrete floor

3.5 Contingency Plan:

In the event that concentrations of PCBs > 1 ppm are identified in remaining building materials following the post-cleanup quality control sampling, that material and adjacent substrate will also be removed in accordance with the objectives of the Plan.

4.0 Remedial Waste Management:

All PCB material removed for off-site disposal will be managed in accordance with **Section 3.2.3** of this plan until transported to the approved disposal facility. While on-site, the waste containers shall be labeled with PCB warning labels as specified at 40 CFR 761. The waste containers will be transported under a Uniform Hazardous Waste Manifest by a MADEP licensed transporter, and marked "Polychlorinated biphenyl, solid mixture UN 3432", in accordance with DOT 49 CFR Parts 171 and 172.

- All PCB Bulk Product and Remediation Waste (Caulking and masonry) will be disposed of at a RCRA Subtitle C facility approved to accept TSCA waste or a state-approved landfill facility to be determined by the Contractor in accordance with §761.62(b).
- All liquid remediation waste generated will be disposed of in accordance with §761.60.
- Remaining building debris, including PCB-containing materials identified as "excluded" products, will be disposed of in a landfill to be named by the demolition contractor as solid waste.

What waste going where?

5.0 Maintenance and Monitoring:

No continuing maintenance or monitoring will be required.

6.0 Notifications and Public Involvement:

Copies of this abatement plan are being provided to The Weston Board of Health concurrently with the submission to EPA. As the school will be closed during the abatement and demolition process, public notification will be limited to these entities. Notification of the work schedule will be made at least one week in advance. A sample copy of the Public Notice has been provided in **Appendix D**.

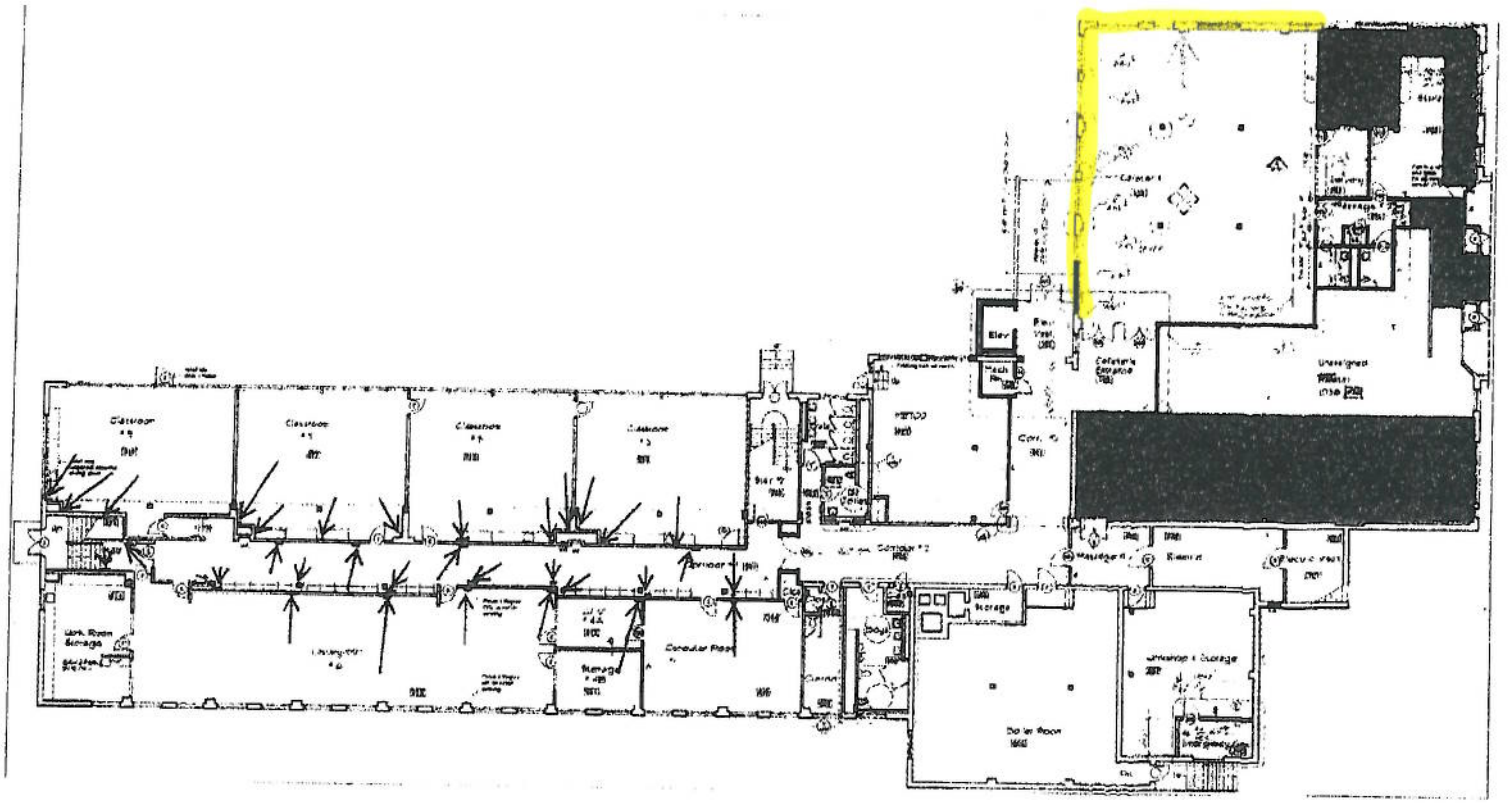
FIGURES

FIGURE 1

Aerial Photograph

99 SchoolStreet
Weston, MA

Lord Associates, Inc.
1506 Providence Highway, Suite 30
Norwood, MA. 02062



■ Grey and/or Red Floor Paint

Blue Wall Paint

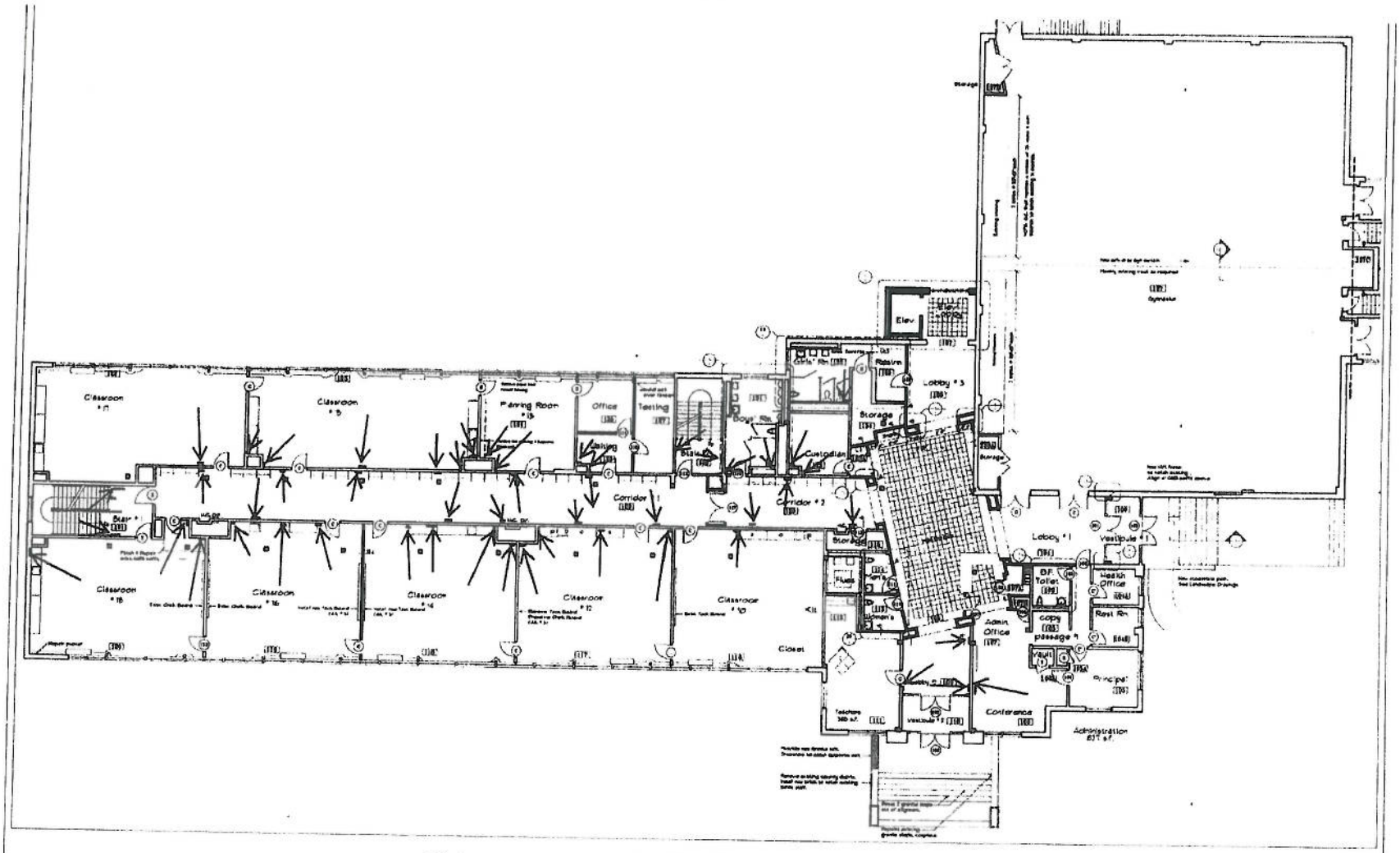
– Observed PCB Caulk Joint

NOTES

1. LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASED ON EH&E'S ASSESSMENT ON JUNE 20, 2012.

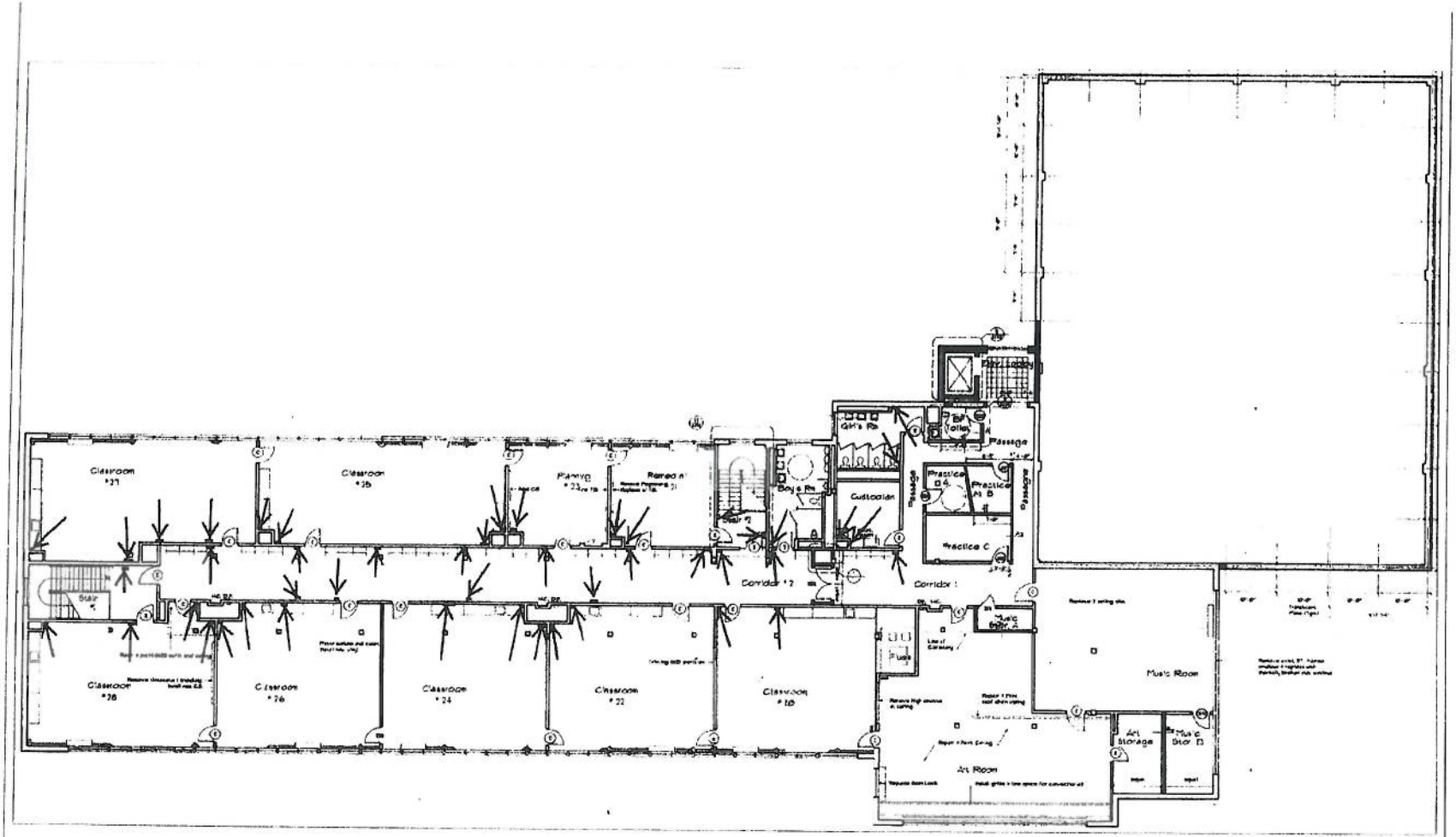
TITLE:	Ground Floor Observed Caulk Joint and PCB Contaminated Paint Locations
CLIENT:	Jonathan Levi Architects
LOCATION:	Ground Floor Field Elementary School Weston, MA
FIGURE ID:	A.7
DATE:	June 20, 2012
CREATED:	ASB/TQT
PROJECT:	17516
	PAGE 1 OF 1

117 Fourth Avenue
Needham, MA 02494
Tel: 781-247-4300
www.ehsinc.com



– Observed PCB Caulk Joint

NOTES 1. LOCATIONS AND DIMENSIONS ARE APPROXIMATE. 2. BASED ON EH&E'S ASSESSMENT ON JUNE 20, 2012.	TITLE: First Floor Observed Caulk Joint Locations	FIGURE ID: A.8	117 Fourth Avenue Needham, MA 02494 Tel: 781-247-4300 www.ehelnc.com
	CLIENT: Jonathan Levi Architects	DATE: June 20, 2012	
	LOCATION: First Floor Field Elementary School Weston, MA	CREATED: ASB/TQT	
		PROJECT: 17515	
		PAGE 1 OF 1	



– Observed PCB Caulk Joint

NOTES 1. LOCATIONS AND DIMENSIONS ARE APPROXIMATE. 2. BASED ON EH&E'S ASSESSMENT ON JUNE 20, 2012.	TITLE: Second Floor Observed Caulk Joint Locations CLIENT: Jonathan Levi Architects LOCATION: Second Floor, Field Elementary School, Weston, MA	FIGURE ID: A.9 DATE: June 20, 2012 CREATED: ASB/TQT PROJECT: 17515 PAGE 1 OF 1	ENVIRONMENTAL HEALTH & ENGINEERING 117 Fourth Avenue Needham, MA 02494 Tel: 781-247-4300 www.ehsinc.com

APPENDIX A

Photo #1:	Grey floor paint, ground floor

Photo #2:	Stairwell, ground floor

Photo #3:	Stairwell, ground floor

Photo #4:	Expansion joint covered by plate behind support

Photo #5:	Expansion Joint plate

Photo #6:	Expansion Joint Plate, first floor

Photo #7:	Floor, ground level

Photo #8:	Expansion Joint Plate, ground floor

APPENDIX B

STANDARD OPERATING PROCEDURE FOR SAMPLING POROUS SURFACES FOR POLYCHLORINATED BIPHENYLS (PCBs)

The Office of Environmental Measurement and Evaluation
EPA New England – Region 1
11 Technology Dr.
North Chelmsford, MA 01863

Prepared by: Dan Granz, Environmental Engineer — Date: 5/5/11

Reviewed by: Kim Tisa, TSCA PCB Coordinator — Date: 5/5/11

Reviewed by: Jerry Keefe – EIA Team Leader — Date: 05/23/11

Approved by: Dan Boudreau, EIA Chemistry Team Leader — Date: 5/23/11

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Revision Page

Date	Rev#	Summary of Changes	Sections
12/97	1	Initial Approval, draft	
3/20/08	2	Major update, only for PCBs, added TSCA sampling	All sections
7/17/08	3	Disposal of dust filter and decon of vac hose	11.0 and 14.0
5/04/11	4	Vacuum Trap Design and Clean-out	9.4

Table of Contents

1.0 Scope and Application

1.1 This Standard Operating Procedure (SOP) is suitable for collection of a porous matrix sample for analysis of Polychlorinated Biphenyls (PCBs).

1.2 This SOP describes sampling techniques for both hard and soft porous surfaces.

1.2.1 Hard surfaces, and most soft surfaces, can be sampled using an impact hammer drill to generate a uniform, finely ground, powder to be extracted and analyzed for PCBs. This procedure is primarily geared at providing enough sample quantity for two analyses. Hard porous surfaces include concrete, brick, asphalt, cement, sandstone, limestone, unglazed ceramics, and other possible PCB suspected material. This procedure may also be used on other softer porous surfaces, such as wood.

1.2.2 Soft surfaces can be sampled using a chisel or sharp knife to generate a representative sample to be extracted and analyzed for PCBs. Soft porous surfaces include wood, wall plasterboard, low density plastics, rubber, caulking, and other PCB suspected material.

1.3 This SOP provides for collection of surface samples (0 – 0.5 inches) and delineation of PCB contamination throughout the core of the porous surface. The procedure can be used to sample the porous surface at distinctly different depth zones.

2.0 Method Summary

A one-inch or other sized diameter carbide drill bit is used in a rotary impact hammer drill to generate a fine powder, or other representative sample, suitable for extraction and analysis of PCBs from porous surfaces. This method also allows the use of chisels or knives for the collection of samples from soft porous surfaces for PCB analysis.

3.0 Definitions

3.1 Field/Bottle Blank: A sample container of the same lot as the containers used for the environmental samples. This evaluates PCB contamination introduced from the sample container(s) from a common lot.

3.2 Equipment/Rinse/Rinsate Blanks: A sample that is collected by pouring hexane over the sample collection equipment after decontamination and before sample collection. The sample is collected in the appropriate sample container identical to the sample containers. This represents background contamination resulting from the field equipment, sampling procedure, sample container, and shipment.

3.3 Field Replicates/Duplicates: Two or more samples collected at the same sampling location. Field replicates should be samples collected side by side. Field replicates represent the precision of the whole method, site heterogeneity, field sampling, and the laboratory analysis.

3.4 Field Split Samples: Two or more representative subsamples taken from one environmental sample in the field. Prior to splitting, the environmental sample is homogenized to correct for sample heterogeneity that would adversely impact data comparability. Field split samples are usually analyzed by different laboratories (interlaboratory comparison) or by the same laboratory (intralaboratory comparison). Field splits are used to assess sample handling procedures from field to laboratory and laboratory comparability.

3.5 Laboratory Quality Samples: Additional samples that will be collected for the laboratory's quality control program: matrix spike, matrix spike duplicate, laboratory duplicates, etc.

3.6 Proficiency Testing (PT)/Performance Evaluation (PE) Sample: A sample, the composition of which is unknown to the laboratory or analyst, provided to the analyst or laboratory to assess the capability to produce results within acceptable criteria. This is optional depending on the data quality objectives. If possible, it is recommended that the PE sample be of similar matrix as the porous surface(s) being sampled.

3.7 Porous Surface: Any surface that allows PCBs to penetrate or pass into itself including, but not limited to, paint or coating on metal; corroded metal; fibrous glass or glass wool; unglazed ceramics; ceramics with porous glaze; porous building stone such as sandstone, travertine, limestone, or coral rock; low density plastics such as Styrofoam and low density polyethylene; coated (varnished or painted) or uncoated wood; painted or unpainted concrete or cement; plaster; plasterboard; wallboard; rubber; caulking; fiberboard; chipboard; asphalt; or tar paper.

3.8 Shipping Container Temperature Blank: A water sample that is transported to the laboratory to measure the temperature of the samples in the cooler.

4.0 Health and Safety

4.1 Eye, respiratory, and hearing protection are required at all times during sample drilling. A properly fitted respirator is required for hard porous surface sampling. A respirator is recommended whenever there is a risk of inhalation of either particulate or volatilized PCBs during sampling.

4.2 All proper personal protection clothing and equipment must be worn.

4.3 When working with potentially hazardous materials or situations, follow EPA, OSHA, and specific health or safety procedures.

4.4 Care must be exercised when using an electrical drill and sharp cutting objects.

5.0 Interferences and Potential Problems

5.1 This sampling technique produces a finely ground uniform powder, which minimizes the physical matrix effects from variations in the sample consistency (i.e., particle size, uniformity, homogeneity, and surface condition). Matrix spike analysis of a sample is highly recommended to monitor for any matrix related interferences.

5.2 Nitrile gloves are recommended. Latex gloves must not be used due to possible phthalate contamination.

5.3 Interferences may result from using contaminated equipment, solvents, reagents, sample containers, or sampling in a disturbed area. The drill bit must be decontaminated between samples. (see Section 11.0.)

5.4 Cross contamination problems can be eliminated or minimized through the use of dedicated sampling equipment.

6.0 Personnel Qualifications

6.1 All field samplers working at hazardous materials/waste sites are required to take a 40 hour health and safety training course prior to engaging in any field activities. Subsequently, an 8 hour refresher health and safety course is required annually.

6.2 The field sampler should be trained by an experienced sampler before initiating this procedure.

6.3 All personnel shall be responsible for complying with all quality assurance/quality control requirements that pertain to their organizational/technical function.

7.0 Equipment and Supplies

7.1 This list varies with the matrix and if depth profiling is required

Rotary impact hammer variable speed drill
1-inch or other suitable (1/2, 3/4, etc.) diameter carbide tip drill bits
Steel chisel or sharp cutting knife, and hammer
Brush and cloths to clean area
Stainless steel scoopulas

Aluminum foil to collect the powder sample
1 quart Cubitainer with the top cut out to collect the powder sample
Aluminum weighing pans to collect the powder sample
Cleaned glass container (2 oz or 40 mL) with Teflon lined cap
Decontamination supplies: hexane, two small buckets, a scrub brush, detergent, deionized water, hexane squirt bottle, and paper towels
Dedicated vacuum cleaner with a disposable filter or a vacuum pump with a dust filter
Polyethylene tubing and Pasteur pipettes
Sample tags/labels, custody seals, and Chain-of-Custody form

8.0 Sampling Design

8.1 A sufficient number of samples must be collected to meet the data quality objectives of the project. If the source of the PCB contamination is regulated under the federal TSCA PCB Regulations at 40 CFR Part 761, the sampler should insure that the sampling design is sufficient to meet any investigation or verification sampling requirements. At a minimum, the following is recommended:

8.1.1 Suspected stained area (s) should be sampled.

8.1.2 At each separate location, collect at least 3 samples of each type of porous surface, regardless of the amount of each type of porous surface present.

8.1.3 In areas where PCB equipment was used or where PCBs were stored, samples should be collected at a frequency of 1 sample/100 square feet (ft^2).

9.0 Sample Collection

9.1 Hard Porous Surfaces

9.1.1 Lock a 1-inch or another size diameter carbide drill bit into the impact hammer drill and plug the drill into an appropriate power source. For easy identification, sample locations may be pre-marked using a marker or paint. (Note: the actual drilling point must not be marked.) Remove any debris with a clean brush or cloth prior to drilling. All sampling decisions of this nature should be noted in the sampling logbook.

9.1.2 Use a Cubitainer with the top cut off or aluminum foil to contain the powdered sample. Begin drilling in the designated location. Apply steady even pressure and let the drill do the work. Applying too much pressure will generate excessive heat and dull the drill bit prematurely. The drill will provide a finely ground powder that can be easily collected.

9.1.3 Samples should be collected at ½-inch depth intervals. Thus, the initial surface sample should be collected from 0 – 0.5 inches. A ½-inch deep hole generates about 10 grams (20 mL) of powder. Multiple holes located closely adjacent to each other, may be needed to generate sufficient sample volumes for a PCB determination. It is strongly recommended that the analytical laboratory be consulted on the minimum sample size needed for PCB extraction and analysis.

9.1.4 Wall and Ceiling Sampling: A team of two samplers will be required for wall and ceiling sampling. The second person will hold a clean catch surface (e.g. an aluminum pan) below the drill to collect the falling powder. Alternatively, use the chuck-end of the drill bit and punch a hole through the center of the collection pan. The drill bit is then mounted through the pan and into the drill. For ceilings, the drill may be held at an angle to collect the powder. Thus the driller can be drilling at an angle while the assistant steadies the pan to catch the falling powder. As a precaution, it may be advantageous to tape a piece of plastic around the drill, just below the chuck, to avoid dust contaminating the body of the drill and entering the drill's cooling vents. Caution must be taken to prevent obstruction of the drill's cooling vents.

9.2 Soft Porous Surfaces

9.2.1 The procedure for the hard porous surface may be used for certain soft porous surfaces, such as wood.

9.2.2 Samples should be collected at no more than ½-inch depth intervals using a metal chisel or sharp cutting knife. Thus, the initial surface sample should be collected from 0 – 0.5 inches. It is important to collect at least 10 grams for analysis.

9.2.3 For soft porous surfaces, such as caulking and rubber, a representative sample can be collected using a metal chisel or sharp cutting knife.

9.3 Multiple Depth Sampling

9.3.1 Multiple Depth Sampling may not be applicable to certain porous surfaces, such as caulking.

9.3.2 Collect the surface sample as outlined in Section 9.1 or 9.2.

9.3.3 Use the vacuum pump or cleaner to clean out the hole.

9.3.4 To collect multiple depths there are two options.

9.3.4.1 Option one: drill sequentially ½-inch increments with the 1 inch drill.

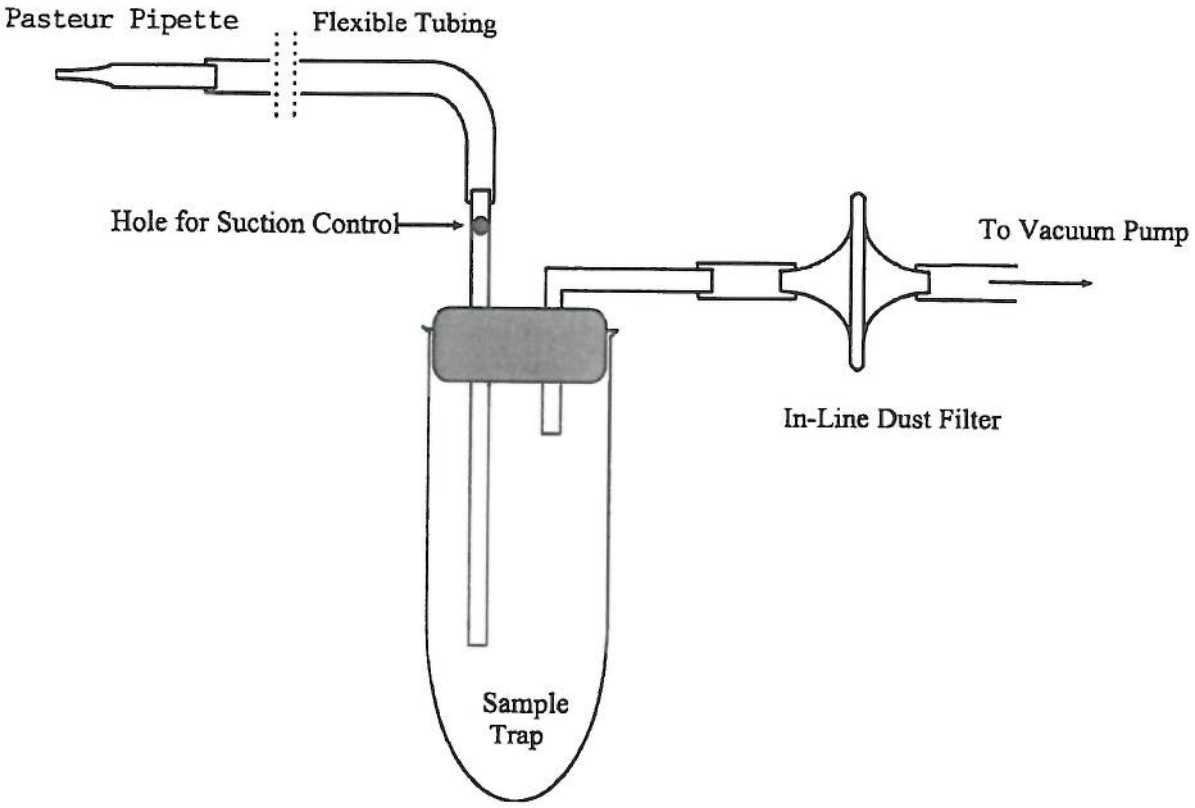
9.3.4.2 Option two: drill with the 1 inch bit and either make the hole larger or use a smaller bit to take the next ½- inch sample.

9.3.5 A stainless steel scoopula will make it easier to collect the sample from the bottom of the hole.

9.4 Vacuum Trap Design and Clean-out

The trap presented in Figure 1 is a convenient and thorough way for collecting and removing concrete powder from drilled holes. The trap system is designed to allow for control of the suction from the vacuum pump and easy trap clean-out between samples. Note, by placing a hole in the inlet tube (see Figure 1), a finger on the hand holding the trap can be used to control the suction at the sampling tip. Thus, when this hole is left completely open, there will be no suction, and the sampler can have complete control over where and what to sample. To change-out between samples the following steps should be taken: 1) the Pasteur pipette and piece of polyethylene tubing at the sample inlet should be replaced with new materials, 2) the portion of the rubber stopper and glass tubing that was in the trap should be wiped down with a clean damp paper towel (wetted with deionized water) and then dried with a fresh paper towel, 3) a clean pipe cleaner should be drawn through the glass inlet tube to remove any concrete dust present, and 4) the glass tube or flask used to collect the sample should swapped out with a clean decontaminated sample trap. Having several clean tubes or flasks on hand will facilitate change-out between samples.

Figure 1



Note: the holes should be vacuumed thoroughly to minimize any cross-contamination between sample depths and the bits should be decontaminated between samples. (See Section 11.0)

10.0 Sample Handling, Preservation, and Storage

10.1 Samples must be collected in glass containers for PCB analyses. In general, a 2-ounce sample container with a Teflon-lined cap (wide-mouth jars are preferred) will hold sufficient mass for most analyses. A 2-ounce jar can hold roughly 90 grams of sample.

10.2 Samples are to be shipped refrigerated and maintained at $\leq 6°C$ until the time of extraction and analysis.

10.3 The suggested holding time for PCB samples is 14 days to extraction.

11.0 Decontamination

11.1 Assemble two decontamination buckets. The first bucket contains a detergent and potable water solution, and the second bucket is for rinsate. Place all used drill bits, hose for the vacuum cleaner, and utensils in the detergent and water bucket. Scrub each piece thoroughly using the scrub brush. Note, the powder does cling to the metal surfaces, so care should be taken during this step, especially with the twists and curves of the drill bits. Next, rinse each piece with water and hexane. Place the rinsed pieces on clean paper towels and individually dry and inspect each piece. Note: all pieces should be dry prior to reuse.

11.2 Lightly contaminated drill bits and utensils may be wiped with a hexane soaked cloth and hexane rinsed for decontamination.

12.0 Data and Record Management

12.1 All data and information collection should follow a Field Data Management SOP or Quality Assurance Project Plan (QAPP).

12.2 Follow the chain of custody procedures to release the samples to the laboratory. A copy is kept with the sampling records.

12.3 The field data is stored for at least 3 years.

13.0 Quality Control and Quality Assurance

13.1 Representative samples are required. The sampler will evaluate the site specific conditions to assure the sample will be representative.

13.2 All sampling equipment must be decontaminated prior to use and between each discrete sample.

13.3 All field Quality Control (QC) sample requirements in a Sample and Analysis Plan (SAP) or QAPP must be followed. The SAP or QAPP may involve field blanks, equipment blanks, field duplicates and/or the collection of extra samples for the laboratory's quality control program.

13.4 Field duplicates should be collected at a minimum frequency of 1 per 20 samples or 1 per non-related porous matrix, whichever is greater.

14.0 Waste Management and Pollution Prevention

14.1 During field sampling events there may be PCB and/or hazardous waste produced from the sample collection. The waste must be handled and disposed of in accordance with federal, state, and local regulations. The dust filter, and tubing if a vacuum pump is used, is disposed after each site investigation. This waste will be treated as PCB waste if the samples are positive for PCBs. It may be possible to manage or dispose of the waste produced at the site where the work was performed. If the site does not meet regulatory requirements for these types of activities, the waste must be transported to a facility permitted to manage and/or dispose of the waste.

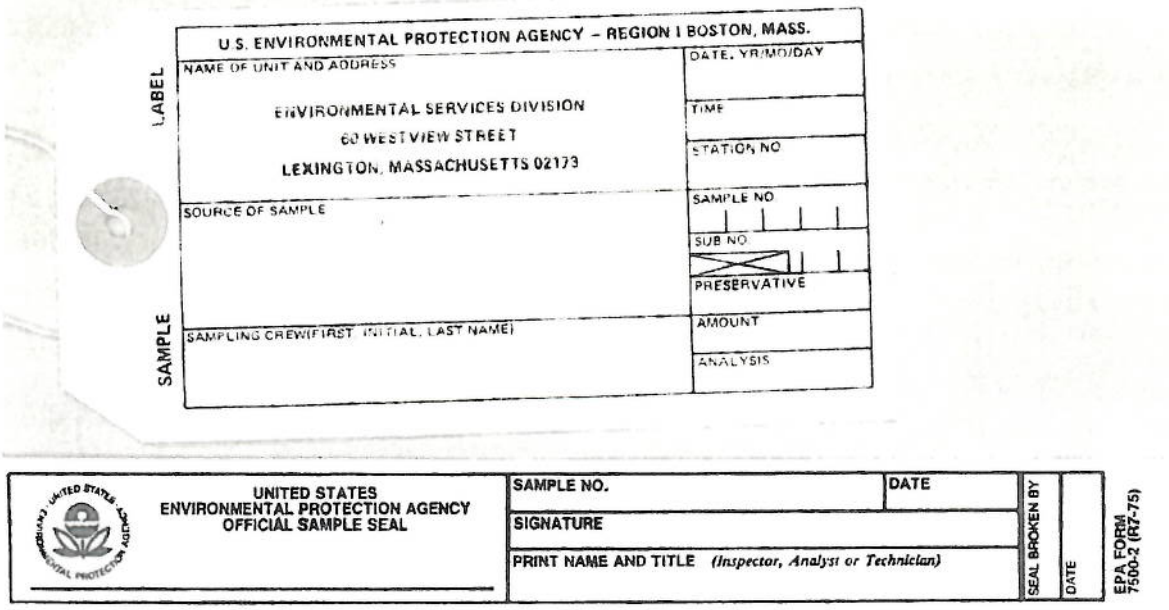
15.0 References

1. Guidance for the Preparation of Standard Operating Procedures for Quality-Related Operations, QA/G-6, EPA/600/R-96/027, November 1995.

2. 40 CFR Part 761 – Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution In Commerce, and Use Prohibitions

3. Sample Container and Holding Time: RCRA SW 846, Chapter 4, Table 4.1, Revision 4, February, 2007.

Example of Sample Label and Custody Seal



U.S. ENVIRONMENTAL PROTECTION AGENCY – REGION I BOSTON, MASS.

LABEL

NAME OF UNIT AND ADDRESS

ENVIRONMENTAL SERVICES DIVISION
60 WESTVIEW STREET
LEXINGTON, MASSACHUSETTS 02173

DATE, YR/MO/DAY

TIME

STATION NO

SAMPLE

SOURCE OF SAMPLE

SAMPLE NO

SUB NO

PRESERVATIVE

SAMPLING CREW(FIRST INITIAL, LAST NAME)

AMOUNT

ANALYSIS

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
OFFICIAL SAMPLE SEAL

SAMPLE NO.

DATE

SIGNATURE

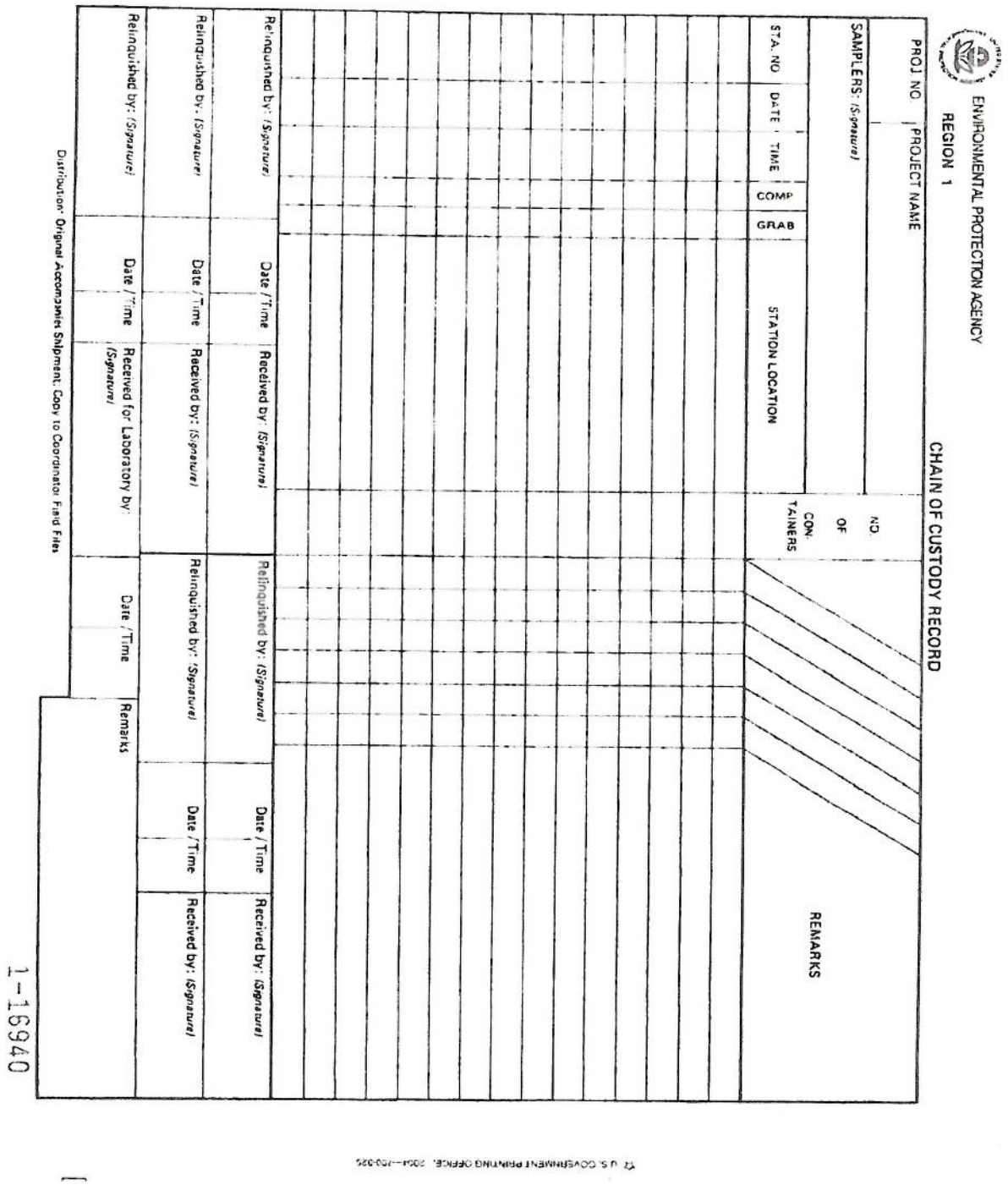
PRINT NAME AND TITLE *(Inspector, Analyst or Technician)*

SEAL BROKEN BY

DATE

EPA FORM 7500-2 (R7-75)

Example of Chain of Custody Form



ENVIRONMENTAL PROTECTION AGENCY
REGION 1

CHAIN OF CUSTODY RECORD

PROJ NO | PROJECT NAME | NO OF CONTAINERS

SAMPLERS: (Signature)

STA. NO	DATE	TIME	COMP	GRAB	STATION LOCATION	REMARKS

Relinquished by: (Signature) | Date / Time | Received by: (Signature)

Relinquished by: (Signature) | Date / Time | Received by: (Signature)

Relinquished by: (Signature) | Date / Time | Received for Laboratory by: (Signature)

Relinquished by: (Signature) | Date / Time | Received by: (Signature)

Relinquished by: (Signature) | Date / Time | Received by: (Signature)

Remarks

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1-16940

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APPENDIX C

PUBLIC NOTICE OF PCB ABATEMENT PROJECT

Field Elementary School

As many of you know, The Town of Weston is preparing for the demolition of the Field Elementary School. As with all construction and renovation projects, The Town of Weston remains committed to the safety and welfare of the entire community. Due to recent changes in Federal Guidelines and an increased public awareness, The United States Environmental Protection Agency (EPA) now recommends testing and the implementation of practices to minimize any potential exposure to Polychlorinated Biphenyls (PCB's). The focus of this initiative is to protect the health and safety of the community, the contractors performing the work and the environment.

Commencing October XX, 2013; contractors will begin to remove expansion joints with caulking and painted surfaces that has been identified as containing PCBs (polychlorinated biphenyls) in excess of thresholds set by the U.S. Environmental Protection Agency (EPA). PCBs were commonly used in the formulation of these materials until 1978. Recently, it has become recognized that at elevated concentrations, PCBs in building materials may represent a health hazard. Therefore, it has been advised that where it is feasible, all of these materials be removed for off-site disposal at an approved facility. Plans have been made to remove all PCB-containing material above threshold limits.

The EPA enforces strict guidelines for performing this work and your cooperation will be paramount in assisting the Town to comply with these conditions. We ask that you observe all restrictions placed on entry into areas where this work is taking place. These areas will be clearly marked by caution tape and posted signs. You may see professional hazardous materials workers in white suits and respirators. The work areas will be monitored and tested to make sure that the work is done properly and that there are no releases to the environment. All testing will be made available to the public.

For more information, please contact: Gerald McCarty, Director of Public Facilities, xxx-xxx-xxxx.